REMARKS/ARGUMENTS

The subsea pipeline commissioning apparatus and methods of the present invention accomplishes pipeline commissioning that is completely subsea using a submersible vehicle (SV) that carries and operates at least one pump on a fill and test skid that is dimensioned and powered to raise the internal pressure of the pipeline sufficiently for hydrostatic testing. A novel and unique aspect of the present invention is the elimination of the need of a surface vessel having pumps on board the vessel to provide the necessary pressure to raise the internal pressure of the pipeline sufficiently for hydrostatic testing.

I. Related Applications

The Examiner's attention is brought to the following co-pending applications:

- Subsea Pipeline Commissioning Method: Serial No. 09/892,314, filed 6-26-01, "Subsea vehicle assisted pipeline commissioning method" Issued 04-01-2003 as 6,539,778. Now Reissue No. 10/716,248 for which a notice of appeal has been filed.
- Subsea Pipeline Dewatering Method: Serial No. 10/365,832, filed 2-13-03 as a divisional of '778, currently on appeal.
- Subsea Pipeline Pig Launcher: Serial No. 11/152,214, filed 6-15-05 – CIP of '832, pending and awaiting first office action.

II. Status of the Claims and Support for Amendments:

Claims 1, 4 and 6 - 9 have been amended. The new claims do not introduce new matter. Support for the new claims can be found throughout the specification and drawings as originally found. For example, support for the new claims can be found, among other places, in the paragraphs indicated in tabular form below:

Claim and element	Support
high-pressure hydrostatic test pressure of claims 1 – 5 and 7 - 9	Explicit support for "high-pressure hydrostatic test pressure" can be found, for example, on col. 2 ln. 33.
a high-pressure hydrostatic commissioning test of claim 6	Explicit support for "high-pressure hydrostatic commissioning test" can be found, for example,

Claim and element	Support
	on col. 2 ln. 36.
the test and fill package of claim 1 carried by an SV as provided by claim 3	Explicit support for the test and fill package carried by an SV is provided, inter alia, in Figures 2, 4, and 6 - 15

III. Rejection of prior claims under 35 U.S.C. § 103

a. The presently cited references are essentially the same as those considered during prosecution of the underlying U.S. Patent 6,539,778.

The art cited against the present reissue claims is *essentially* the same as the art that was applied to the patent claims found allowable by the Examiner in the underlying US Patent 6,539,778.

The purpose of the reissue claims were to clarify that a single pump can perform the claimed method. However, the number of pumps per se has not been an issue in the present prosecution. Independent claims 1, 4, and 7 – 9 have now been amended to clarify that the claimed originally claimed "test pressure" is high-pressure hydrostatic test pressure. Claim 6 has been amended to clarify that the claimed testing is "high-pressure hydrostatic commissioning" testing.

It is respectfully submitted that the factual inquiry of the present claims is no different than that considered in the original Patent claims where the claims were allowed. It follows that the following examiner's statement of reasons for allowance for issuing the above Patent applies equally to this reissue application:

> "The Bliss et al. (US Patent 5,883,303) and Graves (US Patent 5,927,901) discussed in Examiner's earlier Office Actions teach all the limitations as in the instant invention except for using a submersible vehicle to manipulate submerged test apparatus to hydrostatically test a pipeline with both ends on the seafloor."

Accordingly, as a matter of policy and procedural consistency the present claims should be allowable. Such action is respectfully requested.

b. Combining Graves and Bliss

To the extent that the amendments do not resolve the rejections over Graves combined with Bliss, the rejection is respectfully traversed for the following reasons. The Examiner has acknowledged that Graves Deepwater "does not expressly teach pumping and maintaining pressure to assure no leaks as in hydrostatic testing of the present invention." In fact, Graves does not even implicitly teach hydrostatic testing using a subsea high-pressure pump. Instead Graves is directed to and is capable of performing a discrete and limited stage of pipeline commissioning: that of flooding the pipe and performing pigging, primarily using the force of seawater flooding the pipe after or as it is lowered into the water. Given that the hydrostatic head pressure will eventually equalize, a boost pump is provided for pushing the pig any terminal distance of its travel through the pipe that is not otherwise accomplished by flooding. As clearly set out in Graves, the provided method produces a flooded pipeline that is "ready to test" but is clearly not yet tested according to the Graves disclosure. *See Graves* page 160. In Graves Deepwater, as well as Graves US Patent 5,927,901, hydrostatic testing is mentioned consistently as the **next operation to be performed**. There is absolutely no disclosure in any of the Graves references that water can be pumped into the pipeline with the structure disclosed by Graves to a pressure sufficient for hydrostatic testing. In fact, Graves simply could not have performed a step of hydrostatic testing because no subsea pump capable of delivering the required pressure for high-pressure hydrostatic testing is taught or suggested by Graves.

The deficiency of Graves is in no way remedied by Bliss which explicitly states that "the flood pumping and pressure testing equipment is connected to the pig launcher on the [topside] production facility." This is clearly depicted in Figure 7 and in fact illuminates the clear distinction with the claimed invention. The Examiner has stated that Bliss teaches that "it is conventional to combine pressure testing with pigging and flooding because . . . government regulation requires pressure testing." The Applicant agrees that flooding pigging and pressure testing are all required stages of pipeline commissioning. In fact, this reality is disclosed in Applicant's own disclosure. However, it is respectfully argued that this in no way makes obvious a method of pressure testing using a subsea high pressure pump.

Bliss merely provides a valve assembly that is able to vent during flooding and then seal when the pig is received and pressure testing is commenced. In Bliss, the motive force for both flooding and pressure testing is conventionally provided from the topside production platform.

In order, to establish a *prima facie* case of obviousness, the prior art reference (or references combined) must teach or suggest all the claim limitations. MPEP §2143.03. Graves and Bliss simply cannot be combined to provide high-pressure hydrostatic testing using a subsea high-pressure pump when neither Graves nor Bliss teach or suggest such a method and neither provide an apparatus capable of performing such a method.

c. Combining Graves, Bliss and Corbetta

Corbetta is asserted to provide a teaching of an ROV carrying a "seal ring test system for pressure testing a newly assembled section of a conduit" thus rendering obvious claim 3, wherein the test and fill package of claim1 is carried by said SV. To the extent that the amendments do not resolve the rejections over Graves combined with Bliss and Corbetta, the rejection is respectfully traversed for the following reasons. Corbetta teaches a ROV able to operate a number of tools including a "seal ring replacement tool." Referring to Col. 13, ln 66 et seq., it appears that the ROV is able to assist in testing the integrity of conduit connection seals in the microenvironment of a joint using pressurized air (air hot stab). Corbetta provides no teaching or suggestion of an ROV carrying or powering high pressure test pumps, much less those capable of high pressure hydrostatic testing of a pipeline. Even assuming, arguendo, that Corbetta teaches a "pressurizing system", this is does not in any way teach or suggest the claimed "high-pressure hydrostatic testing."

In order, to establish a *prima facie* case of obviousness, the prior art reference (or references combined) must teach or suggest all the claim limitations. MPEP §2143.03. Graves, Bliss and Corbetta simply cannot be combined to provide high-pressure hydrostatic testing using a subsea high-pressure pump when none of Graves, Bliss or Corbetta teach or suggest such a method and none provide an apparatus capable of performing such a method.

CONCLUSION

For the reasons stated herein, the Applicant respectfully submits that independent claims 1, 4, and 6 - 9 are allowable and that the dependent claims are, in turn, also allowable. The Commissioner is authorized to charge any additional fees incurred in this application or credit any overpayment to Deposit Account No. 50-1922. Should the Examiner have any questions, please do not hesitate to call Applicant's attorney at 832-446-2421.

Respectfully submitted,

By //mmhu//
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